

REMARKS

The Examiner objected to our proposed addition to Fig. 3 on the basis that “[t]he original disclosure does not support the showing of the features,” by which the Examiner presumably means the vertically oriented oval openings. To address this concern, we are proposing to generally represent the “elongate hair-capture slots” by dashed lines which are not meant to imply any particular orientation.

The Examiner has identified several instances in which reference numbers were used for two different elements or features. To correct these problems and to show the elongated hair-capture slots, we propose to amend Figs. 3, 11, 12, 18, 27, and 32 as indicated in red on the attached sheets of drawings. More specifically, in Fig. 3, we propose to add dashed lines 121 representing the elongate hair-capture slots that are referred to in claim 9. In Figs. 11 and 12 we propose to change reference numeral 118 to reference numeral 181. In Fig. 18, we propose to change reference numeral 61 to read 161. In Fig. 27 we propose to change reference numeral 243 to read 244. And in Fig. 32, we propose to change reference numeral 41 to read 341 and to change reference numeral 42 to read 342. These changes are being made to address the concerns raised by the Examiner. We ask the Examiner to approve these changes.

We noticed that the units were incorrectly specified on page 9 of the specification. The size of the openings is in microns but the abbreviation that was used to express microns was in error. Instead of using μm , mm was used. This error occurs three times in the middle paragraph on page 9. We have corrected those errors. Support for this is found in the first paragraph on page 18 of the specification. We also note that this was corrected in the corresponding issued European application (i.e., EP 983 131 B1).

The Examiner rejected claims 1-17 and 50-54 as being anticipated by Pranjko (DE M9004739.7). We submit, however, that Pranjko fails as an anticipating reference and in addition it does not teach or even suggest some of the specific features introduced by certain of the dependent claims. We will address each of these points separately below.

Pranjko Fails to Teach the Features of Claims 1, 16 and 17

Contrary to what the Examiner asserts, Pranjko does not disclose the cutter of claims 1, 16 or 17. The Pranjko design registration merely discloses the external, aesthetic look of a fanciful representation of a "Rasierapparat," i.e., a safety-razor, which appears to have a curved grille. Pranjko neither identifies nor describes any of the elements that are shown in his drawing. Furthermore, he says absolutely nothing about how those elements are made, or how they are assembled together, or what lies hidden beneath them. The Examiner, using nothing more than hindsight, is reading details into the reference that are not present.

What Pranjko appears to show is some type of curved grille that extends between two supports. The grille has an outer curved surface on its long side and an inner curved surface on its inner side. But Pranjko presents no written details whatsoever about the nature of the curved surfaces. More specifically, Pranjko presents no written description that in any way indicates that the either surface is elliptic or that either surface is hyperbolic, as recited in claim 1.

It appears that both the outer and inner curved surfaces are generally in the shape of an arc, though the precise geometries of the surfaces are unknown. There is no written description anywhere within the Pranjko reference from which one could conclude that:

the first and second surface regions are shaped such that there exists a cross-sectional plane which intersects the first surface region along a first curved line on which the first surface region is concave with a first radius of curvature and which also intersects the second surface region along a second curved line on which the second surface region is convex with a second radius of curvature larger than the first radius of curvature,

as required by claim 16.

Similarly, there is no written description anywhere within the Pranjko reference from which one could conclude that:

 a first surface region having two orthogonal planes of curvature, and being concave in one plane; and

 a second surface region having two orthogonal planes of curvature, and being convex in both planes, wherein the first surface region merges seamlessly with the second surface region,

as required by claim 17.

In view of the total absence of a written description of the apparatus shown in the Pranjko reference, it must be the case that the Examiner is implicitly arguing that the Pranjko grille "inherently" anticipates the claims. But if that is the Examiner's argument, the Examiner is

ignoring the rather high standard that must be met to justify rejecting a claim as inherently anticipated by a reference. It is basic law that: "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of Calif., 2 USPQ.2d 1051, 1053 (Fed. Cir. 1987); same, Tyler Refrig. v. Kysor Indus. Corp., 227 USPQ 845, 846-47 (Fed. Cir. 1985). "The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 9 USPQ.2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. See In re Bond, 15 USPQ.2d 1566 (Fed. Cir. 1990). For inherency, the Federal Circuit in In re Robertson, 49 USPQ.2d 1949, 1951 (Fed. Cir. 1999) has reiterated the relevant standard: "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient." (emphasis added); (quoting In re Oelrich, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981); same, Electro Medical Sys., S.A: v. Cooper Life Sciences, Ind., 32 USPQ.2d 1017, 1020 (Fed. Cir. 1994). Inherency requires that two conditions be met: first, the feature asserted to be "inherent" must be "necessarily present in the thing described in the reference, and secondly, that it would be so recognized by persons of ordinary skill." Robertson, 49 USPQ.2d at 1950-51; same Electro Medical Sys., 32 USPQ.2d at 1020.

Moreover, the Examiner must be careful in drawing inferences about precise details of general shapes from drawings alone. The M.P.E.P. at §2125 cautions against improper inferences being drawn from drawing figures. While use of drawings is not completely impermissible in certain limited situations, §2125 states in boldface capitals "**PROPORTIONS OF FEATURES IN A DRAWING ARE NOT EVIDENCE OF ACTUAL PROPORTIONS WHEN DRAWINGS ARE NOT TO SCALE**", and explains: "When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurements of the drawing features are of little value." Same, see In re Chitayat, 161 USPQ 224, 226 (C.C.P.A. 1969) (claim to higher quality fiber-optic transmission reciting image displacement of at least 100 fiber diameters, where the cited drawings according to the Solicitor allegedly showed 45 nutations but lacked an explicit numerical teaching relating image displacement to fiber diameter, Court stated "Patent drawings are not working drawings and this argument is predicated, moreover, on a greatly enlarged section of a small drawing obviously never intended to show the dimensions of

anything. We do not find it persuasive." (quoting In re Wilson, 136 USPQ 188, 192 (C.C.P.A. 1963) (emphasis added)). Any attempt to use the figures to infer precise details about what are only represented as general shapes fails to satisfy the preponderance of the evidence standard required to make a rejection based thereon, and it should be withdrawn.

Applicants have reviewed the sole case relied upon by Examiner, In re Mraz, 173 USPQ 25 (CCPA 1972), and find it distinguishable from the present facts. In Mraz, the claim on appeal was directed to the shape of a deburring roller for deburring sheet metal strips, and included the limitation of a groove whose inclined surface was at an angle in a range "not exceeding 15°". The claim was rejected on the figures of a utility patent to Wilson in which the rollers had a V-shaped groove at an angle measuring 6°, whose fabrication was a straightforward matter conventionally known in the art, and thus the prior art angle lay within the claimed range. In contrast to the present issue, the prior art angle was a simple, one-dimensional, scalar quantity measurable in one plane. While it is a truism that a clear showing in a drawing is not disregarded, the Court in Mraz emphasized that the reason for its decision was that the figure "in the Wilson reference focuses on the edge angularity well within the range recited in appellant's claims", 173 USPQ at 27. The sole issue on the figures in Mraz was answered by the simple inquiry whether one V-shaped opening was bigger than another. The Mraz case does not apply to the present facts since there is no focus of the Pranjko figures on the features recited in the present claims, thus there is no clear showing.

Pranjko Is Not An Enabling Reference

More importantly, however, Pranjko is not an enabling reference because Pranjko fails to teach how to fabricate any of the illustrated elements. Simply showing a device or structure does not establish that a person skilled in the art could make it.

Furthermore, the Examiner has not supplied any other evidence to the effect that a person of ordinary skill in the art of shaving cutters would have been able to fabricate a cutter having the complex, but unscaled and wholly unspecified, curvature shown in Pranjko without undue experimentation. Indeed, we submit that such skill did not exist in the prior art. Thus, Pranjko does not provide an enabling disclosure.

The law requiring that a reference must be enabling in order for it to be a valid anticipatory reference is clear. The Federal Circuit has repeated this principle many times. For example:

It is well settled that prior art under 35 U.S.C. §102(b) must sufficiently describe the claimed invention to have placed the public in possession of it. Such possession is effected if one of ordinary skill in the art could have combined the publication's description of the invention with his own knowledge to make the claimed invention. Accordingly, even if the claimed invention is disclosed in a printed publication, that disclosure will not suffice as prior art if it was not enabling. [emphasis added] In Re Donohue, 766 F.2d 531, 533 (Fed. Cir. 1985).¹

In another case, the court wrote:

A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference. In addition, the reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in the possession of a person of ordinary skill in the field of the invention. [emphasis added] In Re Paulsen, 30 F.3d 1475, 1478 (Fed. Cir. 1994).²

This requirement is most often stated in connection with the technical arts that are viewed as being unpredictable, e.g. chemical cases. It is not, however, limited to only to chemical cases or to the unpredictable arts. As indicated by another more recent Federal Circuit court decision, it also applies to the mechanical arts.

A recent case involving a method for securing two or more wythes (i.e., layers of masonry) is particularly instructive. The claimed invention, which was owned by Halifax Ltd., involved dry fixing or tying one masonry layer to another masonry structure. The single method claim included twelve elements among which were three that related to the operation of a tool that was needed to effect the anchoring of a tie into one of the masonry layers without creating any stress such as might be caused by hammering the tie into place.

Halifax brought a suit against Blok-Lok, Ltd. alleging that the company was infringing its patent. Blok-Lok defended by arguing that the patent was invalid because Halifax had disclosed the invention in a brochure which Halifax had distributed to the public in 1993, which was more than one year prior to filing its patent application. The 1993 brochure described Halifax stainless steel ties and their use in masonry refacing and new construction and it described the use of the ties in both "DryFix" and "Dry-Chemical Fix" methods of construction.

¹ Copy of case accompanies this response.

² Copy of case accompanies this response.

Halifax acknowledged that the brochure taught nine elements of the claim but argued that the three elements which related to how the tool operated were not taught. The court noted that:

The brochure might nevertheless be anticipating if a person of ordinary skill in the art would understand the brochure as disclosing elements (8)-(10) and if such a person could have combined the brochure's description of the invention with his own knowledge to make the claimed invention. Halifax Ltd. v. Blok-Lok, Ltd., 208 F.3d 1339, 1347 (Fed. Cir. 2000)

Halifax argued that the tool required to perform the missing steps was not available at the time that the brochure was made public. Blok-Lok failed to submit any evidence that such a tool was available or that a person skilled in the art would know how to make one in view of the 1993 brochure. The court decided that the 1993 brochure did not anticipate the method claim and stated:

We conclude, on the record before us, that Blok-Lok failed to provide clear and convincing evidence that the '93 brochure enables a person of ordinary skill in the art to practice the claimed method. In particular, Blok-Lok did not present any evidence indicating that a person of ordinary skill in the art could have made or obtained a tool capable of being used in the claimed method without an undue amount of experimentation. Halifax Ltd. v. Blok-Lok, Ltd., 208 F.3d 1339, 1348 (Fed. Cir. 2000)³

Applying that standard to the present case, given that there is no evidence of record that a person of ordinary skill in the art could make the Pranjko "cutter," we submit that the Pranjko reference is not an enabling reference and thus fails to anticipate the claimed invention.

The claimed shaving cutter is a complex shape which in the case of the shaving cutter of claim 1 includes convex elliptic and hyperbolic regions⁴. Though it might be easy to visualize that structure, it is not easy to fabricate it.

³ Copy of case accompanies this response.

⁴ Claims 16 and 17 recite the complex nature of the curved surfaces in different ways. Claim 16 defines the curvature in the following way:

wherein the first and second surface regions are shaped such that there exists a cross-sectional plane which intersects the first surface region along a first curved line on which the first surface region is concave with a first radius of curvature and which also intersects the second surface region along a second curved line on which the second surface region is convex with a second radius of curvature larger than the first radius of curvature.

And claim 17 defines it as follows:

a first surface region having two orthogonal planes of curvature, and being concave in one plane; and a second surface region having two orthogonal planes of curvature, and being convex in both planes, wherein the first surface region merges seamlessly with the second surface region.

The present application discloses and describes in detail an electroforming technique which makes it possible to fabricate the complex curvature of the claimed cutter. The disclosed electroforming technique, which uses a mandrel, is the subject of other claims that were the subject of a restriction requirement issued by the Examiner. In other words, that technique is not part of the prior art.

The application does discuss other prior art fabrication techniques and points out their deficiencies for the purpose of constructing cutters having complex curvatures:

Conventional shaving foils for oscillatory dry shavers almost invariably provide only parabolic surfaces. An exception is JP-A-7-646...which describes a foil having an elliptic surface. A base member is formed by applying resist to a flat sheet of metal, patterning the resist and then deforming the metal sheet by a drawing process to form an elliptic surface. The method is limited by the fact that excessive deformation of the initially flat sheet could cause cracking of the resist layer. (Page 1, line 34 to page 2, line 7).

And the application further notes about prior art electroforming techniques:

It has previously been difficult to electroform complicated surfaces having non-zero Gaussian curvature, although attempts have been made to use photolithography to expose a photoresist through a photo-imaging mask. However, conventional photoresists are usually applied as a liquid and therefore allow little or no control over the localised continuity of the photoresist. Whilst this may be satisfactory on a two-dimensional, flat surface, it causes difficulties if the photoresist is applied to a complex three-dimensional shape. Current dry film photoresist is not suited to application onto complex shaped surfaces. (Page 13, lines 9-19).

The Examiner has not identified any technique which would have been known by a person of ordinary skill in the art of shaving cutters or foils and which such a person would have recognized could be used to make a cutter having the complex form of Pranjko's "foil cutter." Indeed, we submit that no such technique existed in the prior art. Thus, without the teaching of the present invention, the skilled person would not have known how to fabricate a cutter having the shape disclosed by Pranjko without undue experimentation.

It should be noted that we are not arguing that a design patent can never be an anticipating reference. We acknowledge that under the appropriate circumstances, not present here, it can serve that purpose. In this case, we are only pointing out that to meet the standard of an anticipating reference, the design patent must also be enabling. In the case of the Pranjko design patent that provides no description whatsoever regarding method of making, it is permissible for the Examiner to point to other teaching outside of the reference to satisfy the enablement requirement. The Examiner, however, has not identified any prior art that enables

the Pranjko device. In fact, we submit that no such teaching exists in the prior art before the date of the present application. Without the teaching found in the present application regarding a method of making complex three dimensional cutter foils, a person skilled in the art would not have been motivated to fabricate a cutter having the complex convex elliptic and hyperbolic regions recited in claim 1 let alone a cutter that also includes any of the additional complex curved surfaces recited in claim 5, in claim 6 or in claim 10.

Pranjko Fails to Teach the Features of the Claims 5, 6 and 10

The Examiner has also rejected claims 5, 6 and 10 as anticipated by Pranjko. But he has not pointed to any features of Pranjko that teach the limitations required by those claims. Indeed, as explained below, the Pranjko "cutter" does not include those features.

Claim 5 recites that the cutter also includes a "concave parabolic skirt region." This region is illustrated by region 114 in Fig. 1. Claim 6 recites that the cutter also includes a "convex parabolic skirt region." This region is illustrated by region 115 in Fig. 2. That is, it is the skirt region in Fig. 2 which is on the opposite side of the cutter from region 114. And claim 10 recites that the cutter also includes "a pair of convex elliptic end cheeks each merging smoothly with the elliptic and hyperbolic regions." The end cheeks are illustrated by regions 112 and 113 in Fig. 1.

Pranjko does not teach or suggest a cutter that also has a parabolic skirt region. If the Examiner is assuming that the center region is Pranjko's 'cutter' that satisfies the requirements of claim 1, it is clear from Pranjko's figures that his "cutter" does not include a parabolic skirt region, either convex or concave, nor does his "cutter" include a pair elliptic end cheeks. It might be true that Pranjko's shaver body extends down from his "cutter" and might define region that the Examiner might analogize to parabolic surfaces. Those parabolic surfaces, however, are not part of Pranjko's "cutter;" rather, they are part of the shaver unit body. Similarly, it might also be true that Pranjko's shaving unit has rounded ends that bound either side of Pranjko's "cutter" and that the Examiner might analogize these to elliptic end regions. But again those rounded ends are not part of the central cutter; rather, they are part of the shaving unit and they define the region between which Pranjko's cutter is mounted.

Moreover, the Examiner has provided no support whatsoever for concluding that a person of ordinary skill in the art would be motivated to include those bounding surfaces as part of Pranjko's "cutter" or to extend Pranjko's "cutter" to include such surfaces. Indeed, one skilled in the art would not be motivated to modify the Pranjko cutter in the manner required by claim 5, claim 6, or claim 10, since a cutter so modified would not fit on the shaver unit body that is taught by Pranjko. In addition, eliminating the rounded ends shown on the Pranjko apparatus would eliminate support for the "cutter" that bridges between the two rounded ends. Furthermore, this would wholly rearrange the visual elements of Pranjko's design and totally alter, indeed destroy, the aesthetic look which is the sine qua non and the singular teaching of the Pranjko reference.

A shaving cutter having the features of claims 1 and 5 or the features of claims 1 and 6 are described in the application as having the following advantages:

...the shape provides a contour of continually varying surface curvature which provides planar, concave and convex shaving surfaces, this offering an improved ability to match the contours of the body, especially in difficult areas such as underarm, legs, neck, jawbone and upper lip, and giving an improved shaving performance. (page 7, line 31 to page 8, line 5)

The Examiner has provided no prior art indicating that a person skilled in the art appreciated that those advantages would result from including such features to the cutter itself.

Moreover, the Examiner has not pointed to any prior art that teaches a method of making a cutter that has a convex elliptic region, a hyperbolic region, and a pair of convex elliptic end cheeks merging smoothly with the elliptic and hyperbolic regions.

We wish to remind the Examiner that the burden which must be met to establish that the features of claims 5, 6 or 10 are obvious modifications to Pranjko's "cutter" is not insubstantial.

It cannot be met by conclusory statements:

Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." In re Dembiczak, 50 USPQ 2d 1614, 1617 (Fed. Cir. 1999).⁵

The Federal Circuit has further cautioned that:

...in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher."

.....

⁵ Copy of this case accompanies this response.

Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability - the essence of hindsight. In re Dembiczak, 50 USPQ 2d 1614, 1617 (Fed. Cir. 1999). (citations omitted)

In other words, one must exercise special care in not letting hindsight influence the obviousness question. There must be a rigorous showing of the reasons why one of ordinary skill in the art would have modified the reference in the manner proposed. So, it would not be sufficient to simply argue that the claimed features are design choices.

For the same reasons as those presented above, we also submit that Pranjko fails to teach or render obvious a cutter having the features recited in claims 11 and 50. Claim 11 recites the two "convex elliptic end zones" which merge smoothly with first and second regions. Claim 50 recites a central shaving region and "at least one convex elliptic end zone merging smoothly with the central shaving region."

Pranjko in view of Packham Fails to Suggest Claims 18, 19, 38, 39, 42, 43, 46, and 47

The Examiner rejected claims 18, 19, 38, 39, 42, 43, 46, and 47 under 35 U.S.C. §103(a) as being unpatentable over Pranjko in view of Packham (GB 2 036 631). The Examiner appears to argue that Pranjko inherently discloses the undercutter required by the rejected claims and alternatively that Packham teaches the shaving system that can be used under the grille shown by Pranjko.

The Examiner's inherency rejection fails to meet the standard required for such rejections. As we have argued above, an inherency rejection requires that the undisclosed features which the Examiner is trying to infer as being present in the disclosed structure must necessarily be present. It is not sufficient to that the undisclosed structure probably is present. And it is certainly not sufficient if other alternative arrangements of equal or higher probability might be present.

In this case, there is no way in knowing what kind of undercutter, if any, is present in the structure shown by Pranjko. It could be a small oscillating structure that moves back and forth from side to side under the grill; it could be a rotating structure that spins about a longitudinal axis of the curved grille; or it could be some other arrangement for providing the shearing or cutting action. In addition, it could be possible that the undercutter(s) need not conform with the

outer cutter. Because there is no way of knowing which possibility might be used and since some of the options do not involve either the "oscillatory movement" or the conforming relationship, as required by claims 18, 38, 42, and 46, Pranjko alone does not support an anticipation rejection of those claims.

With regard to Packham, we note that the undercutter taught by that reference (see transversely slotted cutter section 13) would not work with the element in the Pranjko apparatus that the Examiner has identified as the outer cutter. The undercutter is a straight linear arrangement that would not conform to and thus would not work with the curved outer cutter of Pranjko. Moreover, there is no indication in any of the references regarding how a person might modify cutter section 13 so that it could work within the "shaver" shown by Pranjko. Because of this fundamental mismatch, a person skilled in the art would not be motivated to combine the drive section of Packham with the outer cutter arrangement of Pranjko.

We note that claims 19, 39, 43, and 47, each recite that "the outer cutter has an arcuate longitudinal centre line and the undercutter is correspondingly arcuate." As pointed out above, Pranjko does not and cannot suggest the arcuate center line of the undercutter. The inner workings of the Pranjko structure are completely hidden. And the Packham reference does not teach or suggest a correspondingly arcuate undercutter; rather it teaches a straight linear undercutter.

Pranjko Fails to Teach or Suggest the "Integrally Formed" Feature of Claims 54-56

The Examiner rejected claims 55-56 under 35 U.S.C. §103(a) as obvious over Pranjko. (We assume that he meant claims 54-56). In support of his rejection, the Examiner states that

...it would have been obvious to the ordinary artisan at the time of the instant invention to provide the device of Pranjko with the same material regions in order to facilitate ease of manufacture due to the same material being used to produce the same...

However, as we argued above, there is no ease of manufacture. Indeed, the Examiner has not presented any evidence that it was even known to a person of ordinary skill in the art of shaving cutters how to fabricate the claimed shaving cutter, whether or not it was integrally formed.

Applicant : Charles C. Packham et al.
Serial No. : 09/422,758
Filed : October 21, 1999
Page : 14

Attorney's Docket No.: 11223-002001 / BAG 80043-
US

Pranjko Does Not Teach or Suggest the Feature of Claim 57

New claim 57 adds the feature that the "cutter has both the convex elliptic region and the hyperbolic region when in a stress-free state." This is an inherent result of the process by which the cutter is fabricated according to the specification. As pointed out above, the Pranjko reference contains virtually no description whatsoever so it is does not teach that the grille possesses this feature. Moreover, it cannot be legitimately argued that the Pranjko grille inherently possesses this characteristic since it is easy to imagine that the grille piece is flat in its unmounted state. Indeed, the foils in the prior art are of the type that they are flat in their relaxed state and only take on the curved form when mounted in an appropriate frame, as conventionally shown e.g. in U.S. Pat. 4,493,149 (Tanahashi) of record.

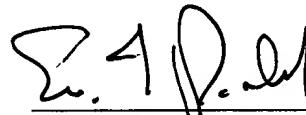
For the reasons presented above, we ask that all claims be allowed. Enclosed is a check for \$18 for the additional dependent claim added in this response.

Attached is a marked-up version of the changes being made by the current amendment.

Please apply any charges not covered or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: October 18, 2001



Eric L. Prahl
Reg. No. 32,590

Fish & Richardson P.C.
225 Franklin Street
Boston, Massachusetts 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

Version with markings to show changes made

In the specification:

Paragraph beginning at page 9, line 10 has been amended as follows;

The top surface 116 will be perforated with non-elongated apertures of the size conventionally used in shaver foils, e.g. 400-800 μm [mm] diameter. The concentric concave and convex side skirts 114 and 115 may also be provided with hair receiving apertures of the conventional size. However, they may also be provided with elongate hair capture slots [121] (represented generally by dashed lines 121 in Fig. 3) for improved capture of long hairs. Such elongate slots may typically have dimensions 2000 μm [mm](maximum) x 200 μm [mm](minimum). The foil is manufactured by electroforming in one piece and is open at its base. By virtue of its shape, the foil has an arcuate longitudinal centre line, like a banana, and may be a sector of a torroid.

Paragraph beginning at page 22, line 19, has been amended as follows:

5.2 As shown in Fig. 32, develop the mandrel pattern in "Developer"™ [41] 341 while stirring with a stirrer [42] 342 and at 20-50°C, preferably 26°C until the aperture pattern is just visible; note the time taken and continue the immersinio for the same period.

In the claims:

Claim 1 has been amended as follows:

1. (Twice Amended) A shaving cutter comprising a skin-engaging surface having both a convex elliptic region and a hyperbolic [reqion] region.